## CIRCLE IN SCRATCH USING PERIMETER

There are number ways to draw a circle in Scratch. This paper is dealing with how to draw a circle with a radius of 'r'. Before we get into that, lets have a look at some basic concepts of circle.

IMPORTANT THINGS

- The perimeter of the circle is proportional to the radius
- Perimeter of a Circle $= 2 * \pi * r$, r = radius of the circle.
- The angle covered by the circle is 360 degree.
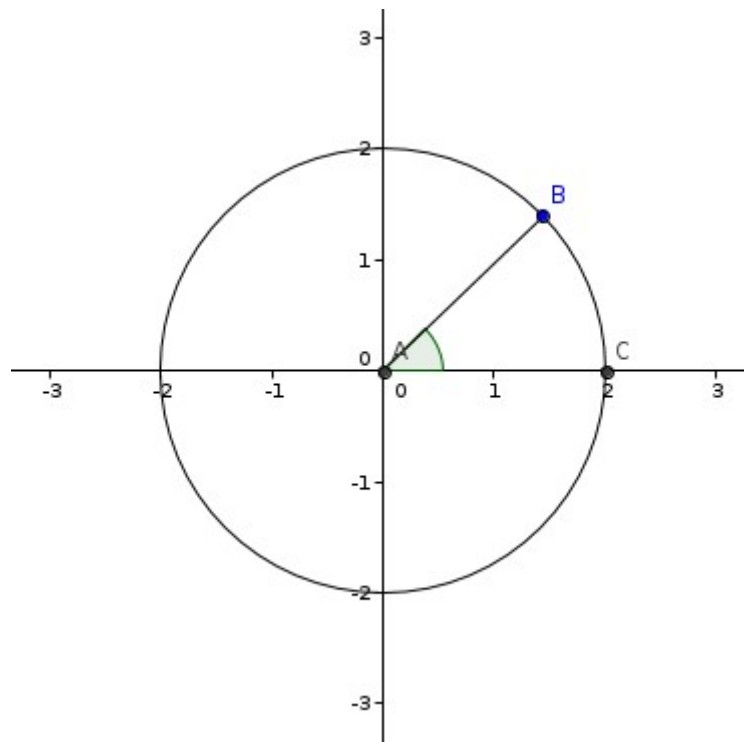
In the fugure, AB is a radius of 2.01 cm makes a angle of 74.45 degree with the x-axis. Then one can say that the distance moved from point C to point B is equal to the product of radius & the angle made (in radians)

We can approximate a circle with a figure with many sides.

- Then the space moved in every step angle is, Perimeter / sides
- Mathematically,

$$DistanceBC = 2\pi r \frac{angle}{360}$$

Since the angle of a circle is 360 the angle we need move each time is also 360/sides. Lets, side = angle, then angle moved is $\dfrac{360}{side}$, where angle here is 60 degree.

SCRATCH CODE

Do to this in the Scratch we all need to specify only the radius & Tolal sides (sides) as given in the picture above.